

REMARKS

This Response responds to the Office Action dated March 11, 2004 in which the Examiner rejected claim 15 under 35 U.S.C. § 102(b), rejected claims 36, 41, 44, 46-52, 54-55 and 57-58 under 35 U.S.C. § 103 and objected to claims 16-19, 37, 39, 42-43, 53, 56 and 59-64 as being dependent upon a rejected base claim but would be allowable if rewritten in independent form.

Applicants respectfully request the Examiner consider the Information Disclosure Statement filed May 4, 2004 as well as the Information Disclosure Statement attached to this response.

Claim 15 claims a powder molding apparatus comprising a mold, a mold transporting mechanism, a compression driving mechanism and a linking means. The mold comprises a die having a powder molding space, and upper and lower punch units. The mold transporting mechanism is for transporting the mold between at least a powder supplying stage, a compressing molding stage, and a molded article extracting stage. The compression driving mechanism is for performing compression molding by driving the upper and lower punch units independently in the compressing molding stage. The linking means is for detachably linking at least one of the upper and lower punch units to the compression driving mechanism, by moving in a direction orthogonal to the compression driving direction of the upper and lower punch units.

Through the structure of the claimed invention having a linking means for detachably linking at least one of the upper and lower punch units by moving in a direction orthogonal to the compression driving direction of the upper and lower punch units, as claimed in claim 15, the claimed invention provides a powder

molding apparatus which can be designed more compactly since no compression force acts in the linking direction. The prior art does not show, teach or suggest the invention as claimed in claim 15.

Claim 15 was rejected under 35 U.S.C. § 102(b) as being anticipated by *Maekawa et al.* (U.S. Patent No. 3,663,147).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 102(b). The claim has been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claim and allows the claim to issue.

Maekawa et al. appears to disclose production of molded articles such as medicinal tablets. (col. 1, lines 5-6) Although the rotational structure is shown in FIG. 6, as having a laminated construction composed essentially of three stories, namely the upper story or upper punch block 51, holding the upper punch members 201 through 217 while permitting their vertical movement, the middle story or die block 52 fixedly holding the die cavities 401 through 417 and the lower story or lower punch block 53 holding the lower punch members 301 through 317 equally permitting their vertical sliding movement, the structure is practically an integral member, or at least functions as one member, because its purpose is to enable the transferring of each combination of punch members and die in parallel while keeping them in a single vertical line. (col. 3, lines 29-41) According to the special feature, upper and lower punch members, each provided with a roller whose diameter is nearly equal to that of the punch member therefore as is indicated by numerals 201a through 217a and 301a through 317a, are employed in addition to the above described conventional members and construction. Simultaneously, a plurality of

semi-annular tracking rails 121, 122, 123 and 124, cooperative with said auxiliary rollers, are installed on the stationary frame 1 of the apparatus. The tracking rail 121 contacts the upper punch members in the positions 204 through 210 at their rollers 204a through 210a while the tracking rail 123 contacts the lower punch members in the positions 304 through 311 at their rollers 304a through 311a. Furthermore, the tracking rail 122 contacts the upper punch members in the positions 212 through 214 at their rollers 212a through 214a while the tracking rail 124 contacts the lower punch members in the positions 312 through 314 at their rollers 312a through 314a. Each of the junctions between the auxiliary rollers and punch members is made so that it can withstand a pressure load of at least 300 Kg. As is shown in FIG. 7, each of the tracking rails is installed on abutments 121a through 124a projecting from the stationary frame of the apparatus through suitable resilient means such as springs 121s through 124s so that they can always keep good contact with the rollers. (col. 4, lines 25-48)

Thus, *Maekawa et al.* merely discloses tracking rails 121-124 which cooperate with auxiliary rollers and are installed on abutments through resilient means such as springs 121s-124s so that they can keep in contact with the rollers. In other words, as clearly shown in Figure 7, the springs 121s-124s are placed such that the rails move in the same direction as the punch members 201-217 are pushed by rollers 61-64. However, as claimed in claim 15, the linking means detachably links at least one of the upper and lower punch units by moving in a direction orthogonal to the compression driving direction of the upper and lower punch units. However, as clearly shown in Figure 7 of *Maekawa et al.*, the springs 121s-124s are used to keep

the tracking rails into abutment against the rollers in the compression driving direction.

Since nothing in *Maekawa et al.* shows, teaches or suggests a linking means for detachably linking the punch units by moving in a direction orthogonal to the compression driving direction of the punch units as claimed in claim 15, Applicants respectfully request the Examiner withdraws the rejection to claim 15 under 35 U.S.C. § 102(b).

Claim 15 was rejected under 35 U.S.C. § 102(b) as being anticipated by *Hinzpeter et al.* (U.S. Patent No. 5,350,548).

Applicants respectfully traverse the Examiner's rejection of the claim under 35 U.S.C. § 102(b). The claim has been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claim and allows the claim to issue.

Hinzpeter et al. appears to disclose a method of making two-layer tablets or pellets in a twin rotor pressing machine. (col. 1, lines 7-9) The structure of the pressing machine is shown in more detail in FIG. 3. A disk-shaped die rotor 52 which is driven to rotate about a vertical axis includes a row of circumferentially spaced die bores 54 extending through die rotor 52 parallel to the vertical axis of the rotor. Each die bore 54 is associated with a pair of compression plungers 54, 56. Upper compression plungers 56 are mounted for axial movement in a disk member 58 which is driven to be rotated synchronously with die rotor 52. In a similar manner lower compression plungers 54 are mounted for axial reciprocal movement in a disk member 60 which is also driven to be rotated synchronously with die rotor 52. The axial positions of plungers 53 and 56 are determined by cams cooperating with the

ends of plungers 53, 56 facing away from disk rotor 52. (col. 5, lines 27-42) A plate 66a following the loading device 62 and supported on disk rotor 52 prevents escape of material from die bores 54 until the upper plungers 56 cooperate with the die bores 54 by means of an upper cam segment 68a of precompression station 34. The precompression means of precompression station 34 are comprised of precompression rollers 70, 72 which determine the amount of compression of the material loaded into die bores 54. The final thickness of the pressed articles is determined by adjustable main compression rollers 74, 76 in the main compression station 36. (col. 5, lines 57-68) As shown in FIG. 3, a cam segment 78 is adjusted by means of solenoid adjusting means 80 such that the lower plungers 53 are displaced upwardly, while the upper plungers 56 are moved also upwardly by means of a cam segment 80a. (col. 6, lines 8-12)

Thus, *Hinzpeter et al.* merely discloses a cam segment 78 which is adjusted by means of solenoid adjusting means 80 such that the lower plungers 53 are displaced upwardly while the upper plungers 56 are also moved upwardly by means of cam segment 80a. Thus nothing in *Hinzpeter et al.* shows, teaches or suggests a linking means which detachably links upper and lower punch units by moving in a direction orthogonal to the compression driving direction of the punch units as claimed in claim 15. Rather, *Hinzpeter et al.* merely discloses a cam segment 78 adjusted by a solenoid adjusting means 80 to displace upper and lower plungers upwardly, which is in the same direction as the compression direction.

Since nothing in *Hinzpeter et al.* shows, teaches or suggests a linking means for detachably linking punch units by moving in a direction orthogonal to the compression driving direction of the punch units as claimed in claim 15, Applicants

respectfully request the Examiner withdraws the rejection to claim 15 under 35 U.S.C. § 102(b).

Claims 36, 41, 44, 46 and 48 were rejected under 35 U.S.C. § 103 as being unpatentable over *Maekawa et al.* or *Hinzpeter et al.* in view of *Hudson* (U.S. Patent No. 4,789,323). In addition, claims 36, 41, 44, 46-52, 54-55 and 57-58 were rejected under 35 U.S.C. § 103 as being unpatentable over *Maekawa et al.* or *Hinzpeter et al.* in view of *Schaidl et al.* (U.S. Patent No. 5,049,054).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in *Maekawa et al.* or *Hinzpeter et al.* show, teach or suggest the primary features as claimed in claim 15 as discussed above, Applicants respectfully submit that the combination of the primary references with the secondary references to *Hudson* or *Schaidl et al.* would not overcome the deficiencies of the primary references. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 36, 41, 44, 46-52, 54-55 and 57-58 under 35 U.S.C. § 103.

Since objected to claims 16-19, 37, 39, 42-43, 53, 56 and 59-64 depend from allowable claims, Applicants respectfully request the Examiner withdraws the objection thereto.

The prior art of record, which is not relied upon, is acknowledged. The references taken singularly or in combination do not anticipate or make obvious the claimed invention.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

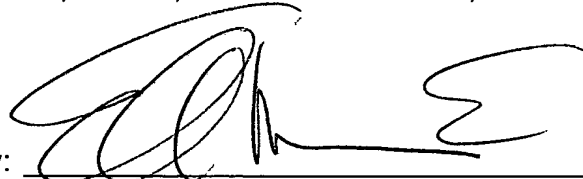
In the event that this paper is not timely filed within the currently set shortened statutory period, applicant respectfully petitions for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

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Respectfully submitted,

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